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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,264	09/11/2003	Nobuyuki Nakamura	4492-0104P	3531

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EXAMINER

LUONG, VINH

ART UNIT	PAPER NUMBER
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3682

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/06/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/06/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/659,264	Applicant(s) NAKAMURA, NOBUYUKI	
	Examiner Vinh T. Luong	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


Vinh T. Luong
Primary Examiner

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/11/03 & 5/26/06</u> | 6) <input type="checkbox"/> Other: _____ |

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1. Pursuant to the Decision on Petition on March 28, 2007, the first Office action on March 28, 2006 is withdrawn and replaced by the following non-final Office action.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1 and 3 are rejected under 35 U.S.C. 102(a) as being anticipated by admitted prior art (*i.e.*, Applicant's Figs. 2A-3B).

Regarding claim 1, Applicant's Figs. 2A-2C teach a cam rotation control mechanism comprising: a rotatable cam 21; a clutch mechanism 23a for transmitting driving power of a rotating device (a motor. *Ibid.*, paragraph [0004] of the specification) to the cam 21 and interrupting the transmission of driving power to the cam 21; and a home position setting device (*i.e.*, a cam rotation control mechanism. *Ibid.*, paragraphs [0004]-[0007] of the specification) for causing the cam 21 to turn to a home position (Fig. 2C) when the transmission of driving power to the cam 21 is interrupted by the clutch mechanism 23a.

The attached *Merriam-Webster's Collegiate Dictionary, Tenth Edition, 1999* defines a clutch as "a coupling used to connect and disconnect a driving part and a driven part of a mechanism." Since the detecting portion 23a is used to connect and disconnect the driving and driven part of the cam 21 as described in paragraphs [0004]-[0007] of the specification, the portion 23a "reads on" the claimed clutch mechanism.

Similarly, Applicant's Figs. 3A and 3B teach a cam rotation control mechanism comprising a rotatable cam 31; a clutch mechanism 33 for transmitting driving power of a

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rotating device (a motor. *Ibid.*, paragraph [0008] of the specification) to the cam 31 and interrupting the transmission of driving power to the cam 31; and a home position setting device (*i.e.*, a cam rotation control mechanism. *Ibid.*, paragraphs [0009]-[0012] of the specification) for causing the cam 31 to turn to a home position (Fig. 3B) when the transmission of driving power to the cam 31 is interrupted by the clutch mechanism 33.

Regarding claim 3, the home position setting device of the admitted prior art in Figs. 2A-2C or 3A-3B is capable of pulling the cam 21 or 31 with a predetermined pulling force when the cam 21 or 31 is in the home position as shown in Fig. 2C or 3B. *Ibid.*, paragraphs [0004]-[0014] of the specification.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 3 are further rejected under 35 U.S.C. 102(b) as being anticipated by Branscomb (USP # 2,915,161).

Regarding claim 1, Branscomb teaches a cam rotation control mechanism comprising: a rotatable cam 27, 28, 30, 31, 46, etc.; a clutch mechanism 4 for transmitting driving power of a rotating device 1 to the cam 27, 28, 30, 31, 46, etc. and interrupting the transmission of driving power to the cam 27, 28, 30, 31, 46, etc.; and a home position setting device 10, 48, 65, etc. for causing the cam 27, 28, 30, 31, 46, etc. to turn to a home position (Fig. 4) when the transmission of driving power to the cam 27, 28, 30, 31, 46, etc. is interrupted by the clutch mechanism 4. *Ibid.*, col. 2, line 51 through col. 5, line 5.

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Regarding claim 3, Branscomb's home position setting device 10, 48, 65, etc. is operative to pull the cam 27, 28, 30, 31, 46, etc. with a predetermined pulling force when the cam 27, 28, 30, 31, 46, etc. is in the home position. *Ibid.*, claims 1-13.

6. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kallin et al. (US Patent No. 4,729,311 cited by Applicant).

Regarding claim 1, Kallin teaches a cam rotation control mechanism comprising:

a rotatable cam 66;

a clutch mechanism 48 for transmitting driving power of a rotating device 50-62 to the cam 66 and interrupting the transmission of driving power to the cam 66; and

a home position setting device 78 for causing the cam 66 to turn to a home position when the transmission of driving power to the cam 66 is interrupted by the clutch mechanism 48. *Ibid.* col. 3, line 39 through col. 4, line 63, and claims 1-18.

Regarding claim 2, the home position setting device 78 comprises a resilient member 78 having one end attached to the cam 66 at a location adjacent a peripheral edge of the cam 66 (FIG. 4) and another end fixed at a location (unnumbered in FIG. 4) outside an outer circumference of the cam 66 such that a stretched length of the resilient member becomes shortest when the cam 66 is in its home position.

Regarding claim 3, the home position setting device 78 is operative to pull the cam 66 with a predetermined pulling force when the cam 66 is in the home position.

Regarding claim 4, the resilient member 78 is a spring.

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7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Takahashi (spring 11), Hara et al. (spring 11), Kawai (spring 46, 55, etc.), Fisher (spring 124), Orville (spring 60), and Ichikatai (Fig. 6a).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinh T. Luong whose telephone number is 571-272-7109. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Luong

April 2, 2007

A handwritten signature in black ink, appearing to read 'Vinh T. Luong', with a long horizontal line extending to the right.

Vinh T. Luong
Primary Examiner